MCCLELLAN MEETING MINUTES

February 26, 2002
McClellan Restoration Advisory Board Meeting
Village School, 6845 Larchmont Drive, Sacramento

RAB Members in Attendance:

Gary Collier, Community Member
Kevin Depies, CA Department of Toxic Substances Control (DTSC)
Bill Gibson, Community Member
Paul Green, Community Member
Carlota Gutierrez, Community Member
Joe Healy, U.S. Environmental Protection Agency (USEPA)
Alan Hersh, McClellan Park
Rev, Tyrone Hicks, Community Member
Paul Plummer, Community Member
Katy Jacobson, Sacramento County Local Redevelopment Agency (LRA)
Rick Solander, Air Force Base Conversion Agency (AFBCA)
James Taylor, CA Regional Water Quality Control Board (RWQCB)
Jillian Tullis, Congress Member Matsui's office
Lola Warrick, Community Member

Welcome and Meeting Guidelines

Marie Rainwater, the meeting facilitator, welcomed all attendees to the McClellan Restoration Advisory Board (RAB) meeting. Ms. Rainwater reviewed the RAB meeting guidelines.

RAB Member and Other Introductions

The RAB members introduced themselves to the public. Roxanne Yonn, Public Affairs Specialist, URS, announced that Merianne Briggs has resigned from the position of McClellan's Environmental Community Relations Coordinator and has accepted another position with the AFBCA at McClellan.

Agenda, Comments on Minutes and Operating Instructions

Ms. Rainwater reviewed the agenda. Ms. Rainwater stated that the RAB's operating instructions were formally approved at the last Executive RAB meeting.

The following handouts were made available to the public (see attachments):

- Response to public comments from October 24, 2001, RAB meeting;
- Air Force press release concerning the discharge of treated groundwater into the municipal sewer system; and
- Cleanup update.

The minutes were approved and finalized with no changes.

Cleanup Update

Rick Solander gave an update on the cleanup activities at McClellan (see attachment).

- Confirmed Site (CS) 10 — The weatherization tent construction is complete. Excavation has started, and approximately 200 bins of soil have been excavated to date. As of this week, approximately 110 drums have been inventoried. Nothing unexpected was found. The first 60 bins of waste were shipped offsite by rail car the week of February 18. McClellan will continue to ship the bins on a weekly basis. During the excavation, discolored soil was encountered, which may be indicative of waste burning. Sampling is to be conducted in this area for dioxins and furans, which are by-products of burning.

- Groundwater Treatment Plant — Sampling of the discharge to Magpie Creek is conducted on a monthly basis. In January, Air Force officials temporarily diverted the treatment plant's discharge, sending it to the sanitary sewer system to prevent elevated levels of hexavalent chromium from entering Magpie Creek. The January monthly discharge average for hexavalent chromium was slightly above the 10 parts per billion (ppb) discharge limit. The monthly average was 10.43 ppb. (The treatment plant does not treat groundwater for hexavalent chromium.) Twenty wells were shut down to lower the amount of discharge, and the discharge was diverted to the sanitary sewer system until sampling results went below the 10 ppb in February. The Air Force will be diligent in finding the source(s) of the hexavalent chromium.

- Operable Unit (OU) B-1 Drainage Ditch — Cleanup began at the site in October 15, 2001. Approximately 2,500 cubic yards (18 inches) of sediment/soils were excavated and stockpiled at the Soil Staging Pile Facility. Analytical results for the confirmation samples indicate some contamination remains in the drainage ditch. McClellan will do additional sampling to determine how much more residual contamination exists. Once the contamination is localized, spot excavation will be performed.

- Budget/Funding — McClellan will receive $49 million this year for its cleanup program; however, next year will be a challenge. McClellan has asked for $24 million and is projected to receive $13 million. This shortfall will result in deferring projects into the following years. Schedules will be adjusted, causing a one-to two-year slippage. AFBCA has worked with the regulators, McClellan Park, and LRA to make sure that the most critical projects are completed, to maintain systems that are in place to protect the health and safety of the public, and to continue the operation and maintenance for the existing systems. It is anticipated that the federal budget will be back on track by fiscal year 2004.

Bill Gibson asked where the containers from CS-10 are being shipped. Mr. Solander answered that the first 60 bins were shipped to Idaho. The destination of these containers will be based upon the level of contamination in the excavated soil.

Paul Green asked if the reprioritizing of the cleanup projects is consistent with the broad prioritization that the RAB recommended. Mr. Green stated that the bottom line was to maintain public health and safety along with expediting the use of the buildings.

Mr. Solander said the AFBCA has been working diligently with the LRA and McClellan Park to make sure that redevelopment needs, as well as cleanup goals, are met.

Gary Collier stated that he is unclear about whether the testing includes the presence of hexavalent chromium at the creek or the treatment plant. Mr. Solander stated that the water is tested at both the influent and effluent locations, which allows an upstream and downstream reading. The hexavalent chromium does not appear to be coming from the treatment plant but from an unknown, belowground source(s) on the base.

Mr. Collier asked if McClellan tested water from actual wells. Mr. Solander stated that the extraction wells have been tested; and they have shown low-level detections of hexavalent chromium. The next step is to test the monitoring wells.

Mr. Solander elaborated that when the 20 wells were shut down, AFBCA's main concern was to maintain plume capture.

Groundwater Formal Dispute Update

James Taylor provided an update on the groundwater formal dispute between the Air Force and RWQCB on the Volatile Organic Compounds (VOCs) Operable Unit Proposed Plan, which was originally issued in March 2000. In April 2000, the RWQCB disputed the Proposed Plan.

In accordance with the McClellan Federal Facility Agreement (FFA), the Senior Executive Committee met in November 2001 to consider the dispute issues. The RWQCB, USEPA, and the Air Force have reached an agreement.

The decision is site-specific and not directly applicable to other sites. There are two main parts to the agreement. Part 1 established that all parties recognize the contested state requirements as applicable relevant and appropriate requirements (ARARs), which will govern the cleanup process and record of decision (ROD). Part 2 established groundwater cleanup levels and a process for the VOC ROD. The parties agreed that the ROD will set the trichloroethene (TCE) cleanup standard at 5 parts per billion (ppb). The individual plumes will be defined by the Base Realignment and Closure (BRAC) Cleanup Team and will be cleaned up and monitored until 5 ppb is achieved. Once those levels are reached in the individual plumes, the BRAC Cleanup Team will do an economic evaluation/cost analysis (EE/CA) to determine if 2.3 ppb for TCE can be economically and technically achieved.

Once the EE/CA is issued, the BRAC Cleanup Team has 30 days to reach agreement on a course of action. If no agreement is achieved, the Air Force can shut off the wells, and the other parties can dispute the conclusion. This agreement has allowed the cleanup at McClellan to move forward without jeopardizing state requirements in the process.

Paul Brunner, McClellan AFBCA BRAC Environmental Coordinator, commented that the Air Force is pleased that they have reached agreement and that they are now able to move forward. Mr. Brunner showed an illustration that depicted the contamination plumes where the first corrective actions will be taken (see attachment).

(Mr. Brunner also noted that it will take a year or more to determine the source of the hexavalent chromium. The Air Force proposed to do a time-critical removal action and requested funding to place a treatment system to remove the hexavalent chromium.)

In regards to the VOC program, in the future McClellan will:

- Install the remaining VOC containment system well, complete the system design and have it installed by calendar year 2004.
- Focus to complete the final VOC ROD.
- Conduct a simultaneous action to install groundwater wells while obtaining the remaining VOC data.
- Conduct the Proposed Plan review in May 2004; the VOC ROD is scheduled to be signed late 2004, along with the installation of the final cleanup system.

Lola Warrick asked since McClellan will have a shortfall of $11 million, what can be accomplished. Mr. Brunner stated that next year will be bleak if additional funding is not obtained. Currently, McClellan is funded to run existing systems and maintain the status quo. McClellan has already postponed projects (transferring the sewer system to the county was postponed until a radiological survey of the system is conducted, and technology efforts for cleanup of disposal sites were placed on hold). The impacts are causing delays in the cleanup schedule. Mr. Brunner encouraged the RAB members to make their voices heard.

Alan Hersh asked what is the range of contamination in the red area on the map. Mr. Brunner stated that the red area is in the range of 10-50 ppb TCE, which is slightly above the federal cleanup level. These hot spots are contained at this time.

Mr. Hersh asked if it were not for the hot spots, would McClellan be finished with the VOC cleanup in the groundwater. Mr. Brunner stated that when the red areas are captured, the Air Force will consider the groundwater cleaned up from TCE. However, an analysis will still be conducted to see if it is economically feasible to go to 2.3 ppb.

Mr. Collier asked if there has been any determination as to whether the plumes migrated. Mr. Brunner stated that the plumes are tracked through the monitoring program. When an extraction well is turned off, the water takes approximately 30 days to rebound. Air Force officials have chosen to shut the wells in the interior of the base until the hexavalent chromium issue is under control.

Cleanup Program Community Interviews Overview: Investigative Interviews

Linda Geissinger, Regional Public Affairs Manager, AFBCA, gave a presentation on the cleanup program community interviews, primarily the investigative interviews (see attachment). This presentation is a response to the concerns raised as to whether Air Force officials have conducted enough interviews for the environmental investigation. Suggestions have also been submitted about contacting new people and different groups.

Ms. Geissinger said long-time employees are the richest source of information on storage and disposal. Since 1979, interviews have been going on to identify potential contaminated sites. Information about spills, storages, and fires are recorded and investigated.

Many methods are used to inform the public that information is needed; these methods include news releases, public notices, media coverage, mailers, letters to employees (in

May 1998, 72,000 letters were sent soliciting information from employees with 20 years of experience), handouts/exit forms, and letters to National Association of Retired Federal Employees.

The extent of McClellan's investigative efforts has been through interviews, research, and testing. Since 1979, between 500 and 700 employees have been interviewed, specifically those whose jobs related to hazardous materials.

After the discovery of the groundwater contamination in 1979, the first step of the environmental investigation was to interview community members. This dialog created the blueprint for environmental cleanup. Since that time, 318 contaminated sites have been discovered.

The Air Force has developed a database containing over 1,000 site-specific entries related to potential waste sites to keep track of the interview information.

Air Force officials continue to use the existing information and to conduct interviews. As discoveries are made, the cleanup program is modified.

The Air Force will be intensifying its research relating to the radiological information. This means that interviews will be conducted targeting employees from the 1950s and 1960s. McClellan officials have gained access to previously classified records, such as the Technical Operations Division archives.

Ms. Geissinger stated that at this time the Air Force does not believe a mass media campaign is appropriate; however, the Air Force will remain open to leads, suggestions, and interviews. The BRAC Cleanup Team agrees with this approach and is very confident that Air Force officials have a good understanding of the environmental condition of McClellan property.

Mr. Collier stated that employees of Technical Operations have previously stated that they do not feel comfortable talking about the duties they performed. He asked if there has been anything to address this issue. He also asked if the declassified documents are public records. Ms. Geissinger stated that recently Air Force headquarters prepared a letter to be shown to interviewees saying they are allowed to talk about types of material and disposal of materials. Air Force headquarters has also given McClellan AFBCA points of contact to interview. Ms. Geissinger also stated that it is her understanding that the declassified documents that McClellan AFBCA is seeking to review have not been made available to the public at this time.

Mr. Green asked if AFBCA has considered advertising through military channels, via newspapers and quasi-organizations such the Air Force Sergeants Association. According to Mr. Green, these organizations will provide public service announcements at no cost. Ms. Geissinger stated that that was a good suggestion; and while cost has not been the factor in determining where AFBCA places advertisements soliciting input, these publications typically do this for no cost. Air Force officials are focusing their efforts on particular groups of people: civil engineers or people who worked with hazardous materials and disposal.

Mr. Green asked if the database has presented a pattern of how various activities were carried out. Ms. Geissinger stated that the database has searching capability for items

such as on specific types of contaminants; however, the database does not specifically provide patterns on past activities.

Mr. Brunner stated the information gathered in investigations does display trends. There is a trend of where the large disposal sites are located. Another trend is the leaks of pipes and spills around the industrial facilities.

Mr. Hersh asked if the investigative interview is a model that was created at McClellan or another National Priority List site. Ms. Geissinger stated that the interview questionnaire has been refined over time by the community relations team.

Joe Healy stated that regarding the comparability of federal facility sites and private sites, federal facility sites are much more complex because of their industrial processes. The private sites usually have records. He is not aware of any standard guidance by the USEPA on interview processes.

Basewide Radiological Conceptual Model

Buddy Walser, radiation expert from Mitretek, gave a presentation on the Basewide Conceptual Model for Radiological Sites on McClellan (see attachment).

Mr. Walser explained that the purpose of this presentation is to show the investigative approach to radiation and to ensure that when the investigation and resulting response actions are complete, the radiological contamination will have been adequately addressed. Mr. Walser encouraged anyone who has information about the radiological problem to approach the community relations team, Mr. Solander, or Mr. Brunner.

Mr. Walser explained that a conceptual model is a functional description of the contamination problem.

Initially, it was believed that radium was the only significant radiological contaminant. On September 6, 2000, plutonium was found at CS 10. This caused McClellan to change its radiological conceptual model.

Air Force officials will need to be able to explain the source of the plutonium, determine if plutonium is found at other locations on the base, and determine if there are any more surprises.

Recently, McClellan was able to obtain declassified information from the Technical Operations Division (TOD). TOD collected air and particulate samples on filter papers by flying through fallout clouds to detect small quantities of radioactive materials. There were also calibration sources which would have been larger quantities than the samples. This appears the most likely source of plutonium at CS-10.

The following are ten scenarios that may explain how radiological contamination might have entered McClellan's environment:

- Burial of radioactive waste;
- Release into sewer lines;
- Runoff from aircraft washing areas;
- Spills;
- Disposal of sewage plant sludge;
- Use of burial site material as landscaping fill;

- Airborne deposition from stacks and vents;
- Accumulation in storm sewers, creeks, and vernal pools;
- Accumulation in sewer lines; and
- Debris from aircrafts.

Mr. Walser stated that there is no imminent danger to public health because of the suspected low-level radioactive waste and because it is confined to specific areas (underground and burial pits). Confirmatory investigations are ongoing, and removal actions will take place where appropriate.

Actions have taken place to protect people. Radiation investigations have been performed at the landfills, creeks, airfield, and buildings. Physical controls such as fences, signs, inspections, and security patrols are in place. All through the process, Air Force officials have coordinated with USEPA and the California Department of Health Services.

Air Force officials will develop site-specific conceptual site models and screen all 319 sites against the basewide radiological conceptual model. Air Force officials will compare all the sites to the 10 previously described scenarios to determine if any of the sites fit. McClellan will continue to conduct surface scans, sewer surveys, sampling and analysis plans, fieldwork, and reports on the findings.

In response to Ms. Warrick's question, Mr. Walser stated that americium is another metal on the periodic table, like plutonium.

Mr. Hersh asked if preparation of the radiological conceptual model is constrained by funding. Mr. Walser stated that if more money, resources, and people were available, certainly it would go faster. The critical point in how we get from where we are today, to taking samples in the field, and revising the conceptual site model for each individual site, is looking at the data.

Mr. Collier commented that the City of Sacramento does not test its water for radiation, and without testing you cannot say that the water is safe. Mr. Walser stated that the Air Force places restrictions to the groundwater beneath the base and has taken people who were impacted by the groundwater off personal wells. In the immediate vicinity of McClellan, groundwater is not being drawn.

Mr. Walser stated that McClellan probably does not have a radiological groundwater plume that has migrated downstream. McClellan has solvent plumes that have been located and delineated. Flow rate is what controls the migration of a plume.

Mr. Collier asked if the non-radioactive water that is being pumped from the aquifer below the base is being tested for plutonium and the other radionuclides. Clif Gray, CS 10 Site Manager, URS, stated that the Air Force has sampled for radiological constituents at certain areas around CS-10 and PRL-32 where there is radiological contamination in the soil. The results have been non-detect in the groundwater. Air Force officials are developing and instituting a more extensive sampling program for radiation in groundwater throughout the base. He stated that radiological properties of the constituents do not tend to go into the groundwater, and there is no imminent risk to the public.

Mr. Collier stated that he believes plutonium is water soluble in some cases. Mr. Gray stated that the groundwater at CS-10 has been tested for plutonium to non-detect results.

Mr. Collier asked if the effluent being discharged into Magpie Creek has been tested for radionuclides. Mr. Walser stated that he would have to get back with Mr. Collier on that question.

Mr. Collier asked whether tissue samples (human or otherwise) have been found at CS-10. Mr. Walser stated that such samples have not been found at CS-10. However, from interviews, there have been indications that tissue samples were taken.

Mr. Collier stated that biological weapons should also be investigated. Mr. Walser stated that this issue has been looked at and has been ruled out. According to unclassified TOD information, biological and chemical weapon testing never took place on McClellan.

Mr. Hersh recommended that McClellan collect samples for radioactive material at the groundwater plant outflow and report back to the RAB. Mr. Walser stated that he would take the recommendation back to the radiation team.

Penny Leinwander, health physicist for California Department of Health Services, stated that she has reviewed the groundwater sampling plan and had requested that the outflow be sampled. She was given the explanation that there would be so much dilution from clean wells that it would better to sample the wells downgradient from the release point.

Mr. Gray stated that there is an effort going forward to sample for radionuclides in the groundwater. The regulators are reviewing the groundwater sampling plan. Mr. Walser said the radiation team is investigating if radionuclides are entering Magpie Creek.

Kevin Depies stated that the groundwater sampling plan went final about a month ago and that the radiological sampling at monitoring wells is underway. Mr. Walser stated that although that sampling plan is in effect for this event, we will continue to search for the answer to these questions: Where is the radiation; what is the risk; and what should be done about it?

Public Comment

Members of the public were given the opportunity to make comments. Following is a summary of these comments.

Gary Sawyer expressed his belief that McClellan's community interview process is flawed. It is his contention that the Air Force, who will benefit the most by no new discoveries or disclosures, controls and makes all the rules for the entire interview process. The effectiveness of the past interviews, mailers, letters, handouts, and news releases over the last 20 years has one major flaw: None of the above forewarned the Air Force about plutonium being buried on base. It is obvious that the Air Force has not heard from those people, and those are the people from whom the Air Force needs to hear. Mr. Sawyer stated that from his ex-laboratory experience, there are thousands of former McClellan employees who have not been contacted. The Air Force has not given clearance to reveal all details or suspicions, despite what has been said by headquarters. The interview process is not getting the word out. He stated that he did not hear the "widely distributed" call for information.

Burl Taylor asked what is being done to keep the new tenants from further contaminating the area and how is this is controlled. Burl Taylor asked that this information to be placed in writing.

In response to Burl Taylor, Mr. Hersh stated that McClellan Park is working closely with the Air Force to create an accurate baseline snapshot of the condition of any property prior to a tenant moving in. McClellan Park then shares the documents with any prospective tenant or lessee as to the condition of the property. An environmental questionnaire is developed to be completed by the tenant and to analyze what type of business is coming in. Further analysis is conducted if needed. This process has been refined over the year.

Next RAB Meeting

The next RAB meeting will be held on Wednesday, March 20, 2002. The purpose of this meeting is that the County of Sacramento would like feedback from RAB members and the public on the issue of privatization of cleanup of a single-site site at McClellan. There will be a poster session from 5:30 p.m. to 6:30 p.m., followed by a presentation from 6:30 p.m. to 7:30 p.m.

RAB Members' Advice, Comments, and Announcements

Mr. Collier requested assistance from the Congressional representatives for public health protection. He stated public health is not protected if the municipal water is not tested for radionuclides, and currently this type of testing is not required. He asked that the Congressional representatives address requiring the municipalities and private surveyors to test.

Bill Gibson requested that AFBCA speak at the Sacramento Environmental Commission again near the end of the year to provide an update on the cleanup progress, results of funding reduction, information on hazardous waste transportation, and the progress of CS-10. Ms. Yonn will work with Mr. Gibson to coordinate this speaking engagement.

Paul Plummer asked if it is possible to document what is going on at CS-10 so that this process can be used as a training tool for similar sites around the country and used as a public relations tool. Ms. Rainwater referred him to the video available at the back of the room.

Attachment 1

McClellan Air Force Base Conversion Agency
Responses to Public Comments
From the October 24, 2001, Restoration Advisory Board Meeting

Several questions and comments were made during the public comment period at the Restoration Advisory Board (RAB) Meeting on October 24, 2001. The Air Force is providing their responses below in order to answer these concerns and to provide information back to the public on McClellan's restoration program.

Public Comment (summarized)	Response
Gary Sawyer stated that the Air Force and the County are intentionally avoiding a step critical to a thorough and timely cleanup of the base. He requested that his letter regarding a public campaign to contact former McClellan employees be entered in the official records. Mr. Sawyer urged the Air Force to get the word out to the community and asked them for their input.	Historically, there have been various media and outreach efforts to reach employees and former employees to learn more about the past disposal practices at McClellan. News releases and articles from the early 80s to the present have requested any employees with information to contact McClellan or state or federal regulators. This same request has been in newsletters and fact sheets. In May 1998, a letter was sent to all employees with more than 20 years of experience at McClellan requesting they come forward with any information they may have. Additionally, those who left McClellan in the February and May 1998 mass checkout were given the same request. The Air Force has conducted 500-700 employee and community interviews. Interviews are continuing today. Those who are interviewed are asked if they know of anyone else who would be helpful in the investigation of potential cleanup sites. These referrals are a good way to find those who may have direct knowledge. Interviews are only a part of the investigative process. McClellan continues to do extensive site research, and field sampling. The Base Realignment and Closure Cleanup Team agrees with this approach. The Air Force will continue to interview those persons who step forward with information and follow up with any

	referrals provided by those currently being interviewed. A presentation will be given at the February 2002 RAB meeting regarding the Air Force's past, current, and future efforts to solicit information from former McClellan employees and the community to help with investigations of base contamination.
Frank Miller asked what the costs were for the CS 10 cleanup project.	Confirmed Site 10 was a disposal site with radium 226 contamination in the soil. During the investigation of the site, a drum was excavated that contained several vials and bottles of liquid containing plutonium. Another drum contained radium paint and other radium items. The BRAC Cleanup team determined that this would become a Time Critical Removal Action because of the unexpected finds of radiological material. The area was weatherized for the winter to maintain the integrity of the site. The site excavation will take one year and one year for the confirmation work to ensure the site is clean. A weatherization tent was installed to allow the excavation work to continue through the winter. It would be more expensive to stop work because of weather and maintain the integrity of the site. The initial estimated cost for CS 10 is $38.4 million dollars. The cost could be lower or higher depending on what is found while excavating the site. The majority of the cost is for transportation and disposal of material to the appropriate disposal site.
Burl Taylor stated that he, along with many other workers in Bldg. 252, were exposed to radium as part of the instrument repair mission. He was involved in body scanning and passed the test. He expressed concerns that more people should be tested. He also said what was not done was an investigation on the people who were deceased.	A letter was sent by AFBCA to the Air Force Radioisotope Committee that explains the history and the current concerns of the former workers and community. AFBCA has asked for the Air Force Radioisotope Committee to respond to the community's questions and concerns by the May RAB meeting.

Attachment 2

Air Force Base Conversion Agency

Press Release

Air Force temporarily diverts discharge of treated groundwater

The McClellan Groundwater Treatment Plant was turned off briefly last night while the Air Force rerouted treated water to the sanitary sewer system. Samples from the McClellan plant effluent showed that chromium 6 exceeded the amount allowed for release into surface waters. The limit is 10 parts per billion. Three samples taken in January showed readings of 10.1 ppb, 11.4 ppb and 9.78 ppb. The treatment plant is not set up to treat metals, like chrome. On Tuesday with the concurrence of environmental regulators, 20 cleanup wells were turned off to lower the potential amounts of chromium 6 entering the system. These wells were selected because their shutdown does not significantly impact the overall cleanup or containment of McClellan's groundwater. Sacramento County Regional Sanitation District was notified that the effluent was being diverted to the county sanitary sewer system. Discharge to the sewer system is allowed because the concentrations are low and within set limits.

The Air Force will continue discharging to the County sanitary sewer system until alternative treatment options are available. They have been working with the California Regional Water Quality Control Board, California Department of Toxics Control and U.S. Environmental Protection Agency to ensure that groundwater treatment continues safely.

The groundwater treatment system uses 56 wells to extract contaminated groundwater from the water table 100 to 300 feet below surface. The water is treated for volatile organic compounds, typically found in cleaners and solvents. Groundwater tests for metals in the1980s showed that metals were not of concern. Each month, the Air Force monitors water leaving the plant to be sure state surface water discharge requirements are met. A protocol was established if metals exceed established levels, the treated groundwater is discharged into the sewer instead of Magpie Creek. The Air Force, along with the state and federal regulatory agencies, will meet next week to review sample results and create a plan to enable continued, safe groundwater cleanup.

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Date: Feb. 1, 2002
No. McC 2-02a

Attachment 3

Restoration Advisory Board Meeting
Cleanup Update - February 26, 2002

1. **Update on Current Cleanup and Field Activities:**

a) **Confirmed Site (CS) 10.** Tent construction complete. Excavation began January 7th. Over 200 bins of soil have been excavated. Initial drum segregation complete (All 110 drums have been inventoried). 60 bins shipped offsite by rail car for proper disposal on 23 February. Nothing unexpected has been found. During excavation, discolored soil encountered, which may be indicative of burning. Sampling to be conducted for dioxins/furans.

b) **Ground Water Treatment Plant (GWTP).** The January monthly discharge average for Chromium 6 was slightly above the 10 parts per billion (ppb) discharge limit. The monthly average was 10.43 ppb. The January Chromium 6 results for the GWTP discharge were:

Sample Date	Result
1/16/02	10.10 ppb
1/22/02	11.40 ppb
1/30/02	9.78 ppb
	10.43 ppb average

As a result, the discharge to Magpie Creek was diverted to the Sanitary Sewer in accordance with the GWTP Operations and Maintenance (O&M) Plan. The levels of chromium 6 encountered are safe for discharge to the sanitary sewer. The Air Force sent out a Press Release on the issue on February 1st. Before discharge to the sanitary sewer, selected extraction wells were shut down due to sewer capacity constraints. Groundwater plume capture was maintained with the well shutdown.

With selected extraction wells shut down, the discharge was re-sampled in February in accordance with the O&M Plan. A chromium 6 result of 8.61 ppb was reported and the discharge was diverted back to Magpie Creek on February 19th. The Air Force continues to troubleshoot the specific source location of the chrome 6.

c) **Operable Unit (OU) B-1 Drainage Ditch.** Cleanup began October 15th. Approximately 2500 cubic yards of sediment/soils were excavated and stockpiled at the Soil Staging Pile Facility (SSPF) soils management area. Analytical results from the confirmation samples indicate some contamination remains in some of the drainage ditch. Discussions were held with the regulators and it was concluded that additional discrete sampling would be performed within the contaminated segments to ascertain the depth to clean soil. Results from that sampling will be discussed with the regulators in the near future. Similar sampling was performed at two locations in the gunite-lined portions of the drainage ditch. Due to inclement weather it was decided to suspend any additional excavation in the ditches for the winter months.

d) **Budget/Funding.**

⇒ This Year - $49 Million
- Our efforts are working well

⇒ Next Year will be a challenge
- Asked for $24 Million
- Projected to receive $13 Million - full funding not in Federal Budget. To date, anticipated funding was not plused up to capture past deferments

⇒ Adjusted schedules to compensate for anticipated shortfall
- Results in one to two year slippage on cleanup schedules
  - Protection of public health maintained and existing cleanup systems remain operational

⇒ Federal Budget should get back on track in Fiscal Year 04

e) **GroundWater Monitoring Program (GWMP)** - 1st Quarter 02 GWMP began on February 4th with groundwater level measurements. Sampling of 64 groundwater monitoring and extraction wells began on February 11th and will be completed on or near March 1st.

f) **Soil Vapor Extraction (SVE) Systems (10 of 14 operational)**
1) Investigative Cluster (IC) 1 Vapor Granular Activated Carbon (VGAC) is operational.
2) IC 7 VGAC is operational.
3) IC 23 VGAC is operational.
4) IC 27 VGAC was shut down on 1/02/02 for rebound.
5) IC 31 Catalytic Oxidation (Cat Ox) is operational, returned to operation on 1/18/02.
6) IC 35 Flameless Thermal Oxidation (FTO) is operational.
7) IC 35 VGAC is operational.
8) IC 43 FTO is operational.
9) IC 43 VGAC is operational.
10) PRL T 44 VGAC is operational.
11) OU C1 Cat Ox was shut down because of low Destruction/Removal Efficiencies. URS replaced the catalyst on February 15th. System is receiving some additional maintenance and systems checks prior to operation March 1st.
12) OU D Site S Cat Ox returned to operation on 1/21/02 but shut down because of failed blower bearing on February 6th with projected restart early March.
13) SSA-2 Thermal Ox system is down due to control panel failure.
14) PRL S-13 FTO is operational.

g) **SVE/SVM Well Installation at: IC-19 (4), IC-31 (2), IC-29 (1), IC-32 (1) & OUC-1 (4).** URS has completed the borings and well construction except for well tagging and drill cutting soils disposal.

h) **Petroleum, Oils and Lubricants (POL) activities included:**
1) Bldg. 26 Bioventing unit is operational.
2) Tank Farm 2 - Bioventing unit operational.
3) Tank Farm 7 - Biovent unit is not operational. Motor malfunction. To be sent to manufacturer. Downtime unknown.
4) Capehart Gas Station - Bioventing unit is operational.
5) MAT K - Bioventing unit operational.
6) Davis - Bioventing unit operational.
7) Bldg. 7D - Waiting for destruction certification, landscaping, striping.
8) Bldg. 251 - This tank is a solvent tank site and will be remediated under CERCLA protocol.
9) Bldg. 262 Underground Storage Tank (UST) - Removal of fuel in progress. UST removal Work Plan sent 14 Jan 2002.
10) Building 332 - Work Plan sent 14 Jan 2002.
11) Bldg. 655 C and D - Final closure request for No Further Action (NFA) sent on 10/03/01.
12) 7C UST - Final closure request for NFA sent on 10/05/01.
13) Bldg. 209A - Re-sample Work Plan sent 19 Nov 2001.
14) Bldg. 209B - UST removal Work Plan sent 19 Nov 2001.
15) Bldg. 367 - Removal of fuel in progress. UST removal work plan sent 14 Jan 2002.
16) Bldg. 614 - Re-sample Work Plan sent 14 Jan 2002.
17) Bldg. 628 - UST Draft removal Work Plan sent 14 Jan 2002
18) Bldg. 656 - Analytical reviewed. Requires Work Plan for bio-vent remediation.
19) Bldg. 900A-D - Sesoil model completed by Mitretek. Closure report started.

i) **Radiation Program.**
1) CS 10: Discussed in item a) on page 1.
2) Airfield Surveys: Cabrera Services has completed gamma drive over scan. Data reviews to continue and soil samples are being analyzed. Draft report due February 28th.
3) Low Lying Area: Scanning and in-situ gamma spectroscopy measurements in low-lying areas within 250 feet of runway and taxiway have begun. Some *In Situ* Object Counting System (ISOCS) unit measurements were taken in December in low-lying areas but not in the vernal

pools due to seasonal rainfall and still awaiting permission from Fish and Wildlife Service. Survey will continue in spring 2002.

4) Plutonium Background Reference Survey (for Waste Disposal) – all samples have been taken (160). Final Report received February 19th.
5) Landfill Surveys: Baseline of previous RI work completed, and landfills needing additional work identified. Project validated, SOW being prepared. Strategy is to use scan surveys, solid sampling, in-situ gamma spectroscopy measurements.
6) Building Surveys: Surveys continue to be performed (18 buildings to survey). Twenty buildings have been released; 4 buildings are currently in regulator review, expected to be completed by April 2002.
7) Radiation Conceptual Site Model: Draft final submitted for regulator review on 12 February.
8) Radiation Survey of Sewer: Preparation of Field Sampling Plan for effort started.

j) **Site Security** is performed on a daily basis at all environmental retained properties and sites. Security at CS 10 and at other sites has been increased. A Sheriff's Patrol has been contracted to perform checks during off-duty hours.

k) **OU B-1 Cap** 4th Qtr. inspection and the Annual Report was completed. A chain-link fence was installed by McClellan Park, which could have compromised the cap integrity at OU B-1. Repairs were made by McClellan Park to seal the penetrations. Soil removed during the post installation was sampled and determined to contain PCBs. This soil will be shipped off-site for proper disposal. A small asphalt patch is planned for a small PCB hot-spot (PRL-29) just east of the existing cap. **OU D Cap** 4th Qtr. inspection and the Annual Report was completed. No deficiencies were identified during the 4th Qtr inspection.

l) **PRL S-033** Site restoration near Bldg. 786A was completed in October 01. Excavated soil to be shipped out for disposal this week.

m) **Soil Staging Pile Facility.** Project phase 2 construction of the facility commenced in early November. Inclement weather has delayed construction and will not proceed until weather permits.

n) **Technology Demos:** Soil washing technology scaled operational demonstration began 7 January (rather than 23 Jan) and ran for the scheduled run of three weeks completed on January 28th. The equipment will remain on site for three months with release of liability with URS/Brice.

o) **Soils Management Plan.** The Draft was revised and will be distributed for BCT comments.

p) **Drainage Channel** Maintenance & Cleaning of North areas was completed by Sacramento County.

q) **The U.S. Army Corps of Engineers (USACOE) verified wetland delineation of the west area,** and the verification letter was received. The final delineation report and maps were distributed July 13, 2001. Additional signage for new vernal pools being procured and installation to follow.

r) **Creeks conceptual site model** draft document was circulated to regulatory Remedial Project Managers for review, and comments were received by July 30, 2001. Review by California Department of Fish and Game was completed on August 23, 2001. On 16 November 2001, the Air Force requested a 90-day extension for the Draft Final Creeks Conceptual Site Model to respond to regulatory agency comments. The Air Force determined that an update of the maps and tables in Appendix B was needed to adequately respond to these comments. An additional 30 day-extension was requested due to delays in funding. The deadline has been extended to 18 March 2002.

s) **Vernal pool restoration plan** draft document completed. Plan was submitted to US Fish and Wildlife Service (USFWS) in January 2001 with request for Section 7 consultation. At a meeting with the USFWS on 7 February 2002, it was determined that no restoration would be required since the damaged vernal pool appears to have restored itself naturally. Additional preservation will be required in the West Nature Area. The vernal pool restoration plan will be discontinued. The settlement agreement, consisting of 6.3 acres of vernal pool preservation, will be documented in the Biological Opinion for base disposal.

2. <u>Deliverable Status Report (DSR)</u>: See attached for documents scheduled for completion or review in next 45 days.

DSR's By Manager - Next 45 Days

Current as of Tuesday, February 26, 2002 4:18:54 PM EST

DSR Number	Project Manager	Doc Title	Doc Type	OU Code	Deadline Date	Extension Date	Completion Date
771-1	Brian Hovander	FOST: Parcels A1, A2, A3, A15, L1 & L3	Draft	BW	3/15/2002		
554-3	Buddy Walser	OU A RICS Addendum	Final	A	2/2/2002	3/18/2002	
571-4	Buddy Walser	Rad BW CSM	Agency Rev DF	BW	3/7/2002	3/15/2002	
571-5	Buddy Walser	Rad BW CSM	Final	BW	4/4/2002		
768-2	Buddy Walser	Indoor Air Risk Tech Memo	Agency Rev. D	GW	3/1/2002		
768-3	Buddy Walser	Indoor Air Risk Tech Memo	Final	GW	4/2/2002		
667-2	Clifford Howe	UST Closure Report - Bldg 7C	Agency Rev D	H	1/29/2002	3/28/2002	
676-2	Clifford Howe	UST Closure Report - Bldg 600	Agency Rev D	B	1/29/2002	3/28/2002	
679-2	Clifford Howe	UST Closure Report - Bldg 65SC&D	Agency Rev D	A	1/29/2002	3/28/2002	
710-2	Clifford Howe	UST Work Plan - Bldg 209A	Agency Rev D	A	2/28/2002	3/28/2002	
711-2	Clifford Howe	UST Work Plan - Bldg 209B	Agency Rev D	A	2/28/2002	3/28/2002	
713-1	Clifford Howe	UST Work Plan - Bldg 262C	Draft	A	2/28/2002		1/14/2002
716-1	Clifford Howe	UST Work plan - Bldg 628	Draft	B	2/28/2002		1/14/2002
716-2	Clifford Howe	UST Work plan - Bldg 628	Agency Rev D	B	3/29/2002		
722-1	Clifford Howe	UST Biovent Work Plan - Bldg 756	Draft	B	3/31/2002		
650-1	Dave Green	Rad Unincorporated Area-FSSR	Draft	B	11/1/2001	2/28/2002	
658-1	Dave Green	PRL 32 FSP	Draft Final	C	12/10/2001	3/1/2002	
331-5	Diane Kiyota	RD - III Work Plan	Draft Final	GW	3/18/2002		
336-3	Diane Kiyota	Well Abandonment Summary Report	Final	GW	6/30/1999	3/29/2002	
474-2	Diane Kiyota	GMP Quarterly (CY01-3rd) Report	Agency Rev F	GW	2/28/2002		
753-1	Diane Kiyota	RD-III Data Gap FSP	Draft Final	GW	2/28/2002		2/14/2002
753-2	Diane Kiyota	RD-III Data Gap FSP	Agency Rev DF	GW	3/18/2002		
757-1	Diane Kiyota	FSP to Modify the GMP to add SW6010, SW7196, SW7199 and SW8270	Draft	GW	2/13/2002	2/28/2002	
758-2	Diane Kiyota	FSP for Ultraclean Sampling at GWTP	Agency Rev D	GW	3/18/2002		
290-1	Don Gronstal	Catalyzed Ozonation Tech Memo	Draft	GW	4/30/1999	3/11/2002	
292-5	Don Gronstal	Enhanced DNAPL Extraction Tech Memo	Final	GW	3/11/2002		
386-1	Don Gronstal	Aggressive Remediation Tech Memo	Draft	GW	1/19/2001	4/11/2002	
541-3	Don Gronstal	Thermal Desorption Tech Memo	Draft Final	BWN	3/12/2002		
541-4	Don Gronstal	Thermal Desorption Tech Memo	Agency Rev. DF	BWN	4/12/2002		
552-3	Don Gronstal	Remedial Process Optimization Work Plan	Final	BWV	7/30/2001	3/25/2002	
564-1	Don Gronstal	Wet Oxidation Bench Scale	Draft	BWN	10/22/2001	4/1/2002	
663-2	Don Gronstal	Passive Diffusion Sampling Report	Agency Rev D	BWN	3/15/2002		
766-2	Doug Fortun	Capehart Gas Station Investigation Work Plan	Agency Rev. D	N/A	3/20/2002		
766-3	Doug Fortun	Capehart Gas Station	Final	N/A	4/1/2002		

		Investigation Work Plan					
766-4	Doug Fortun	Capehart Gas Station Investigation Work Plan	Agency Rev F	N/A	4/12/2002		
605-2	Doug Self	VZ Quarterly [CY01-4th] Monitoring Rpt	Agency Rev F	BW	4/1/2002		
770-1	Doug Self	Shallow Soil Gas FSP	Draft	BW	3/22/2002		
506-3	Molly Enloe	Creeks Conceptual Site Model	Draft Final	C	8/13/2001	3/18/2002	
507-2	Molly Enloe	Stuck Truck Restoration Plan	Agency Rev D	C	5/1/2001	2/28/2002	
507-3	Molly Enloe	Stuck Truck Restoration Plan	Draft Final	C	4/1/2002		
572-3	Paul Bernheisel	Soils Management Manual	Agency Rev D	BW	3/15/2002		
646-1	Paul Brunner	NFA Proposed Plan	Draft	NFA	3/1/2002	4/1/2002	
497-1	Rick Solander	Reuse EIR	Draft	BW	6/29/2001	3/29/2002	
384-5	Scott Dickinson	Rad FSSR - Bldgs 722, Bay 8 and 1080	Draft Final 2	BWR	12/29/2000	3/1/2002	
384-6	Scott Dickinson	Rad FSSR - Bldgs 722, Bay 8 and 1080	Agency Rev DF2	BWR	4/12/2002		
498-1	Scott Dickinson	Rad FSSR - Bldg 458	Draft	A	3/22/2002		
499-3	Scott Dickinson	Rad FSSR - Bldg 655	Draft Final	B	2/22/2002	4/12/2002	
533-1	Scott Dickinson	Rad FSSR - Bldg 1022	Draft	G	8/28/2001	4/4/2002	
534-1	Scott Dickinson	Rad FSSR - Bldg 19	Draft	A	8/28/2001	4/11/2002	
539-5	Scott Dickinson	Rad FSSR - Bldg 783, Bays K,S &T	Final	C	1/11/2002	3/1/2002	
542-4	Scott Dickinson	Rad FSSR - Bldg 721	Agency Rev DF	C	10/19/2001	3/8/2002	
542-5	Scott Dickinson	Rad FSSR - Bldg 721	Final	C	3/28/2002		
549-2	Scott Dickinson	Rad FSSR - Bldgs 351, & 368	Agency Rev. D	A	1/25/2002	3/29/2002	
603-1	Scott Dickinson	Rad FSSR - Bldg 262	Draft	A	2/28/2002	8/26/2002	
604-1	Scott Dickinson	Rad FSSR - Bldg 263	Draft	A	2/28/2002	8/26/2002	
638-1	Scott Dickinson	Rad FSSR - Bldg 280	Draft	A	3/29/2002	9/27/2002	
655-1	Scott Dickinson	Rad FSSR - Bldg 783, Bays A-I, & L-P	Draft	C	11/23/2001	3/29/2002	
601-4	Steve Mayer	PRL S-033 Interim Removal Action Report	Agency Rev DF	IP	2/28/2002		
601-5	Steve Mayer	PRL S-033 Interim Removal Action Report	Final	IP	3/14/2002		
769-2	Steve Mayer	Draft BW Non-VOC FS RTC	Agency Rev D	IP	3/8/2002		
769-3	Steve Mayer	Draft BW Non-VOC FS RTC	Final	IP	3/22/2002		

McClellan Groundwater Actions To Date (CY 02)

LEGEND:

GROUNDWATER CONDITION

- NO ACTION REQUIRED
- CONTAMINATION BELOW MCL PROJECTED TO NOT REQUIRE ACTION
- CONTAMINATION ABOVE MCL* THAT IS CONTAINED
- CONTAMINATION ABOVE MCL THAT MAY REQUIRE AN ACTION
- AREA OF THE OFFBASE RESIDENTIAL WATER HOOKUPS (Completed in 1980's)

- 57 EXTRACTION WELLS
- GROUNDWATER PIPELINE

351 ACTIVE MONITORING WELLS (NOT SHOWN)

* MCL= Maximum Contaminent Limit- Federal Drinking Water Standard.

Attachment 4

McClellan
Restoration Advisory Board

Investigative Interviews

Linda Geissinger

26 Feb 2002

Attachment 5

Opening

- Interviews conducted
  - When
  - Who
  - What we found out
- History
  - How they contribute to the cleanup
  - Evolution of knowledge continues
- How we've used the information
- Database
- Today/Tomorrow

Background

- Introductions
  - Many people are involved
- Different types of interviews:
  - Cleanup interviews
    - Disposal
    - Radiological
    - Facilities
  - Community relations interviews
- Tonight's focus is cleanup interviews
  - Long-time workers are richest source

How do we get the word out?

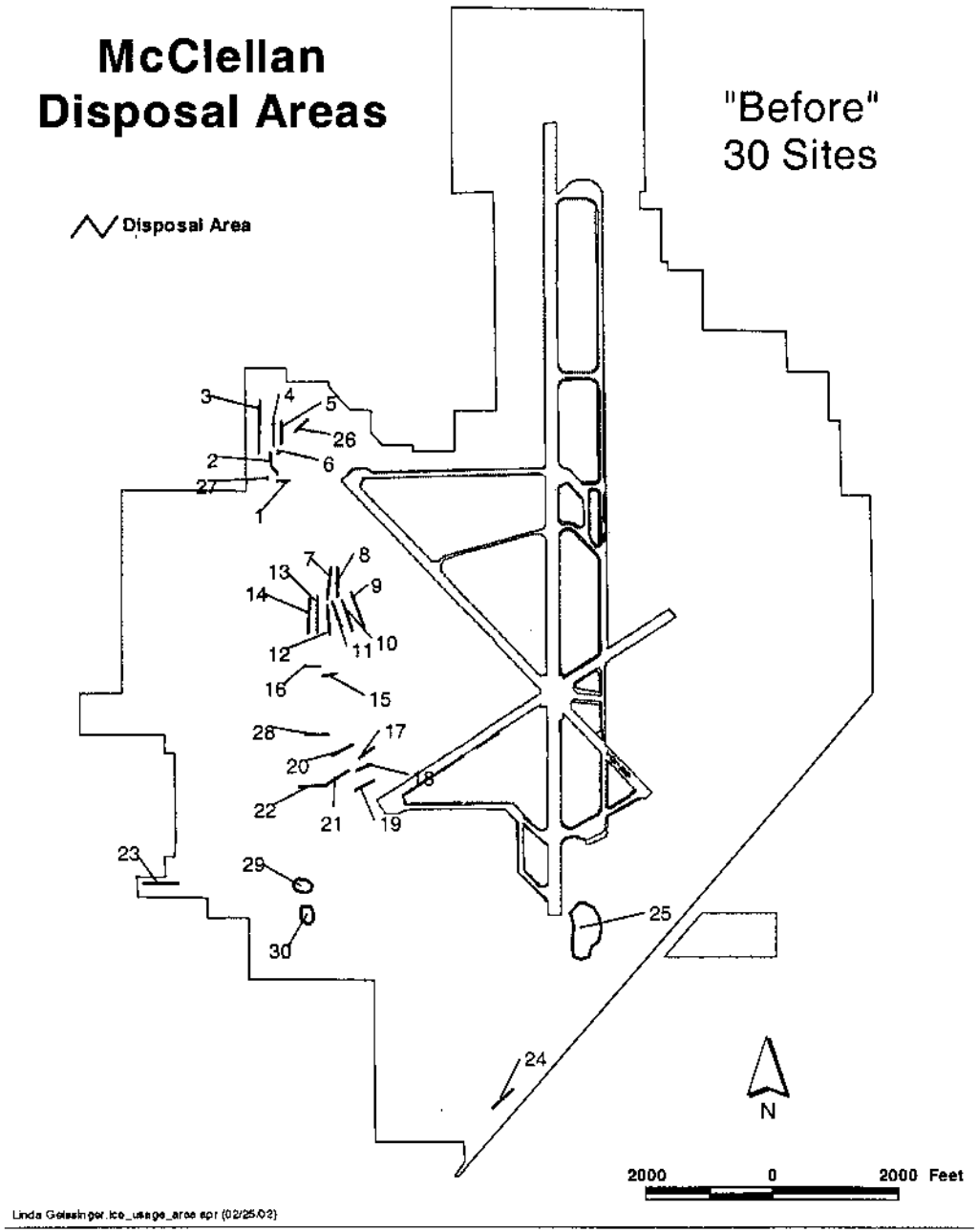
- **News Releases** (e.g. Oct 94 , Jul 95)
- **Public Notices** (e.g. Jun 00 A-6, display ad)
- **Media Coverage** (from early 80s – present)
- **Mailers** (newsletters, announcements, fact sheets)
- **Letters to employees** (May 98, 72,000 ltrs mailed to those with more than 20 years experience)
- **Handouts/Exit Form** (Feb and May 98 mass checkout)
- **National Association of Retired Federal Employees**
- **Natl Assoc. of Atomic Veterans, Tech Ops Alumni Assoc.**
- **Special Events** (tours, lunches, informal groups)

Extent of our investigative efforts

- Since 1979, 500 – 700 employees interviewed
- More than 1,000 database entries
- Extensive records searches:
  - Historical information on mission, buildings, materials
  - Photographs, site inspections, aerial clues
- Extensive water and soil testing
  - More than 550 monitoring wells on and off base
  - Field samples total more than 2.5 million individual chemical results

Historical Perspective

	Sites identified to date
1979 -1981	30
1981	45
Mid-80s	256
Today	318


McClellan
Disposal Areas
"Before"
30 Sites
Disposal Area
3
4
5
26
2
6
27
1
7
8
13
9
14
12
11
10
16
15
28
17
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18
22
21
19
23
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N
2000
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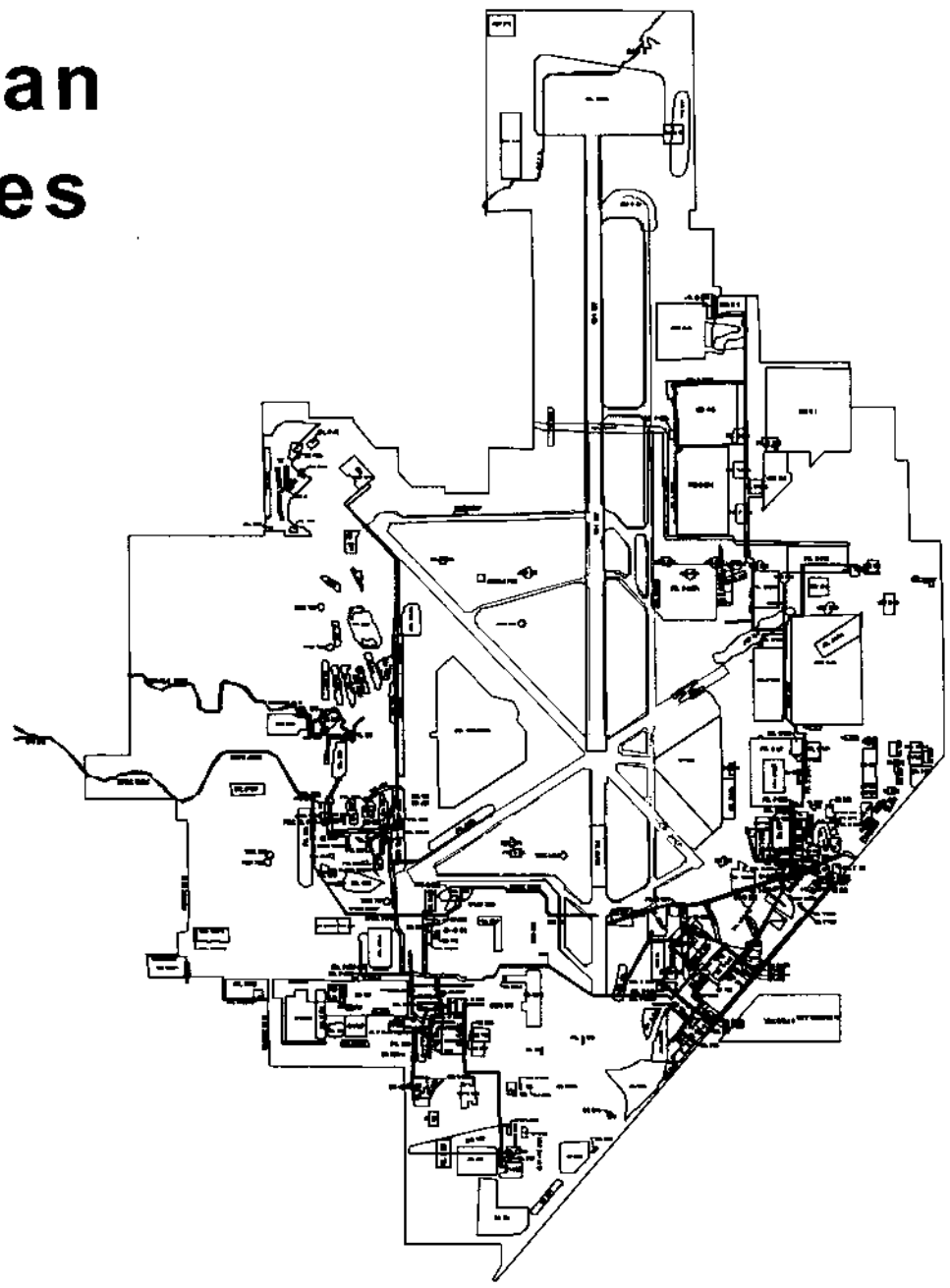
2000 Feet
Linda Geissinger.lce_usage_area.epr (02/25/02)

McClellan IRP Sites



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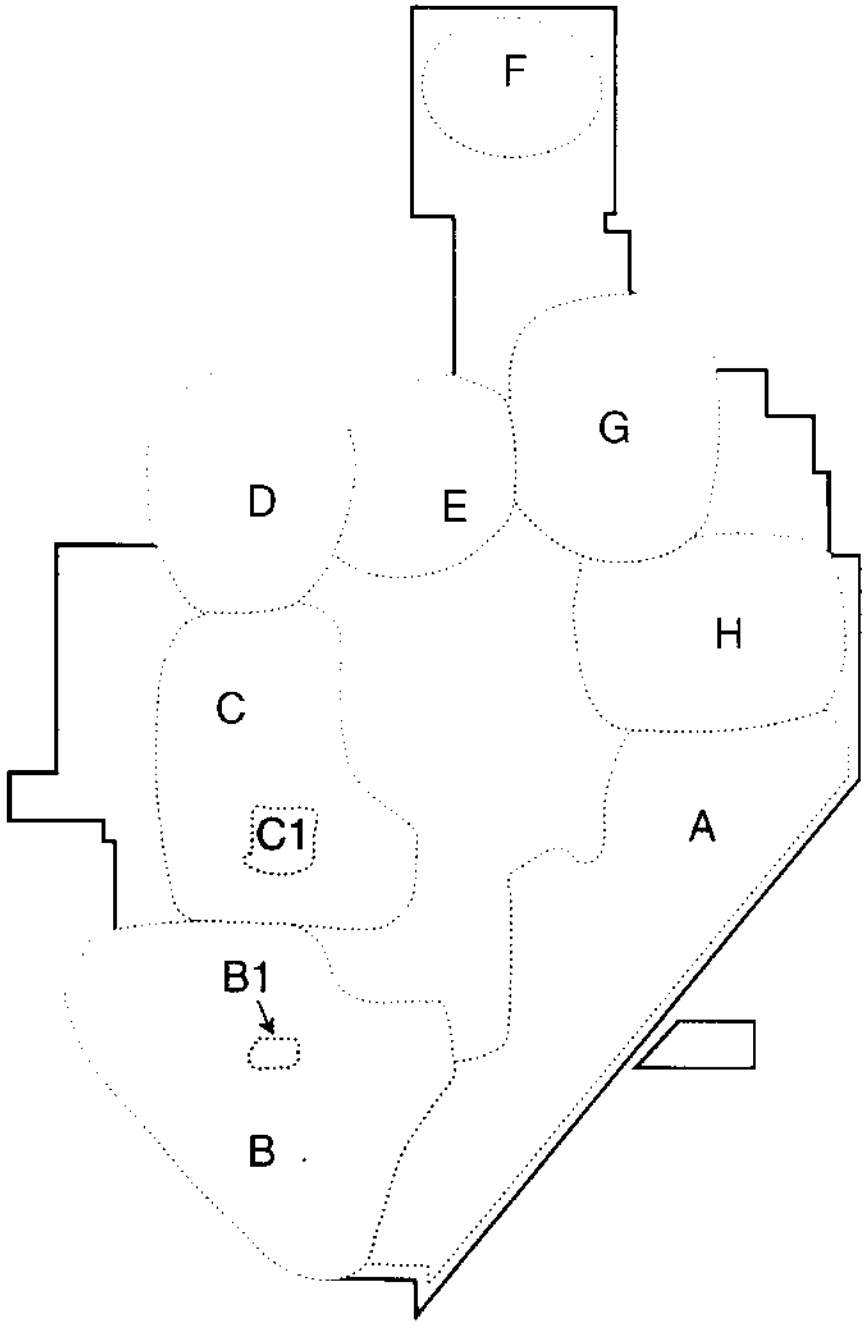
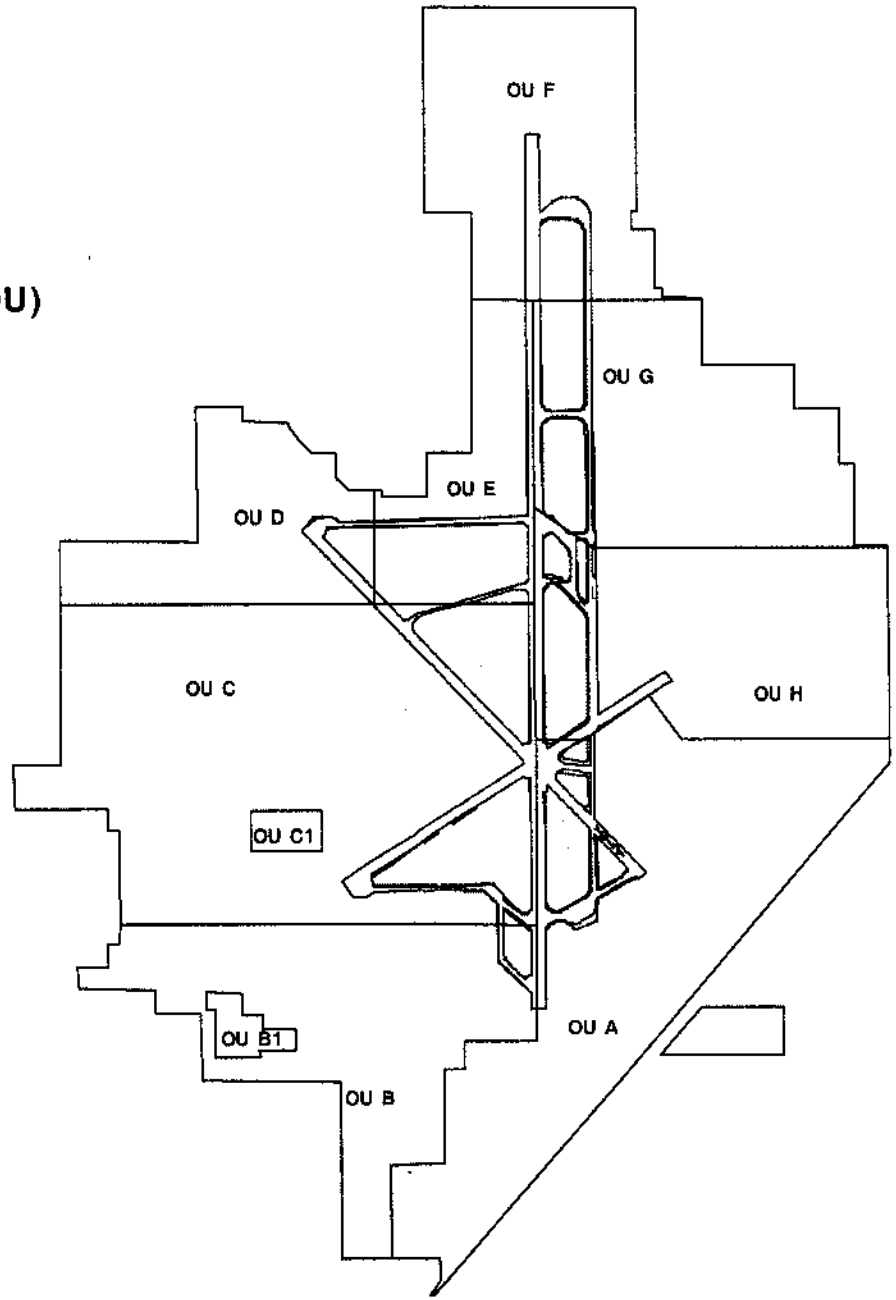
McClellan Areas A-H



MCClellan OU's

Operable Unit (OU)



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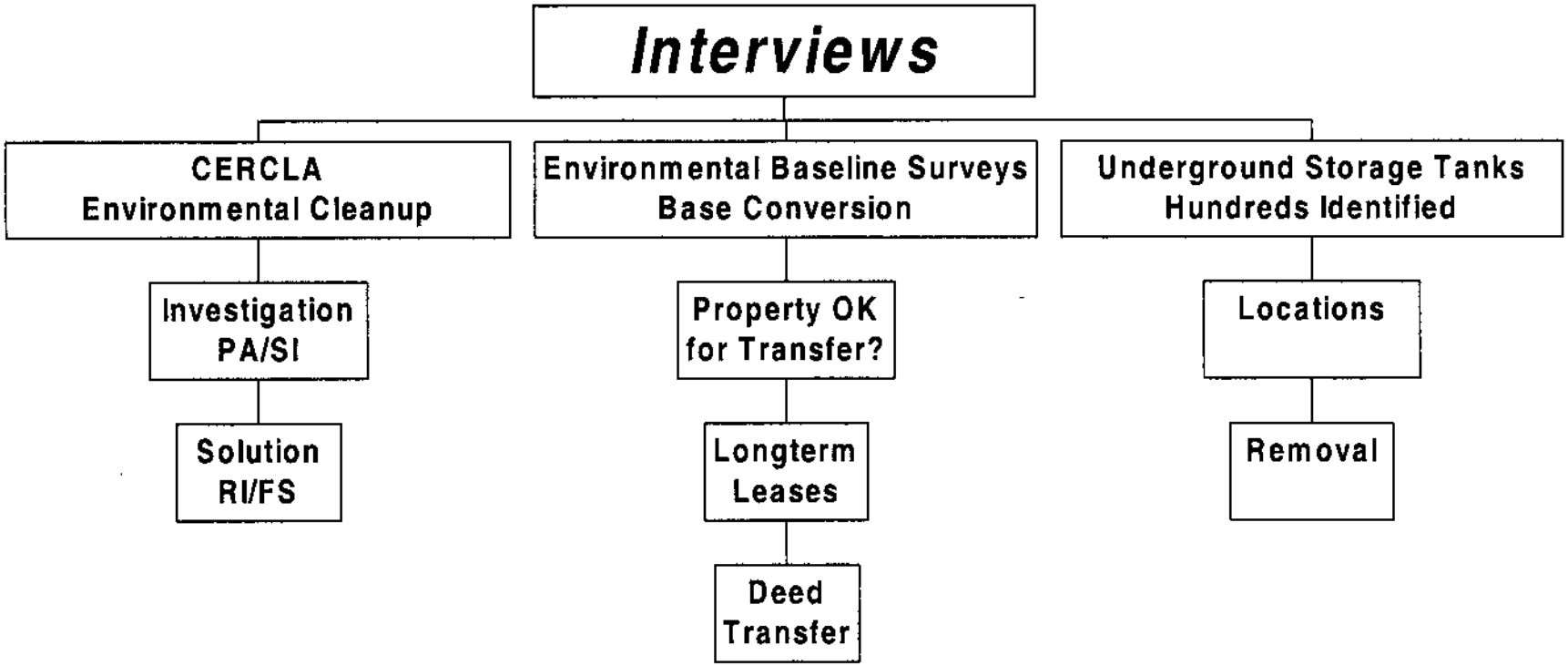
How we've used it



Interview Database

- Central, electronic archive
- Database tool - quick access
- 1,000 entries – site specific information related to potential waste sites
  - Every problem is given its own listing
  - Search by buildings, locations and types of contaminants
- Did we look into it? Yes, book verifies it.

Today

- We continue to use the information
- We continue interviewing
  - Any information that comes to light, we will check it
- Extensive investigation, makes surprises minimal but possible
  - Radiation and CS-10
- We continue modifying cleanup plans
  - Adjust to account for most conservative possibilities
  - Entire classes of waste are considered, despite where waste came from

Future

- We've intensified radiological research
  - Very specific focus
  - Includes interviews, buildings, records
- We're gaining access to classified records
  - Technical Operations Division Archives
- Additional people are conducting research and interviews
  - Not just what one individual group of people did, but entire category of waste

Wrap Up

- Thorough, focused interviewing will continue
- Extensive work has produced significant results
- Remaining flexible for new challenges
- Mass media campaign is not being pursued
- BRAC Cleanup Team agrees with our approach

Attachment 6

Basewide Radiological Conceptual Model

AFBCA-McClellan
2/26/02

Topics

- Why are we talking to the RAB?
- What is a conceptual model?
- Why did McClellan change its radiation conceptual model?
- History of radiation at McClellan
- Ten scenarios
- Are we in danger *now*?
- Side Note: Protecting People
- Bottom line
- What next?

Why are we talking to the RAB?

- **Inform**
  - Show the approach to radiation
  - Show that: "When we're done, we're done."
    (Ensure that when the investigation and resulting response actions are complete, the radiation contamination will have been adequately addressed.)
- **Request Feedback**
  - Is the model technically sound?
  - Are the scenarios comprehensive?
  - Are there additional people the Air Force should interview?
  - Are there additional information sources the Air Force should examine?
  - Contact: Community Relations Team, Rick Solander, Paul Brunner

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Keep the process open:

Information out to RAB

Information/insight in from RAB

What is a conceptual model?

- A functional description of the contamination problem:
  - Description of a site and its surroundings
  - Hypotheses for contaminants, migration, and potential impact
- Used for:
  - Identifying potential sources, release mechanisms, nature and extent of contamination, and exposure scenarios.
  - Deciding what data to collect.
  - Selecting responses.

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Based on what we know at a given point in time.

Record searches

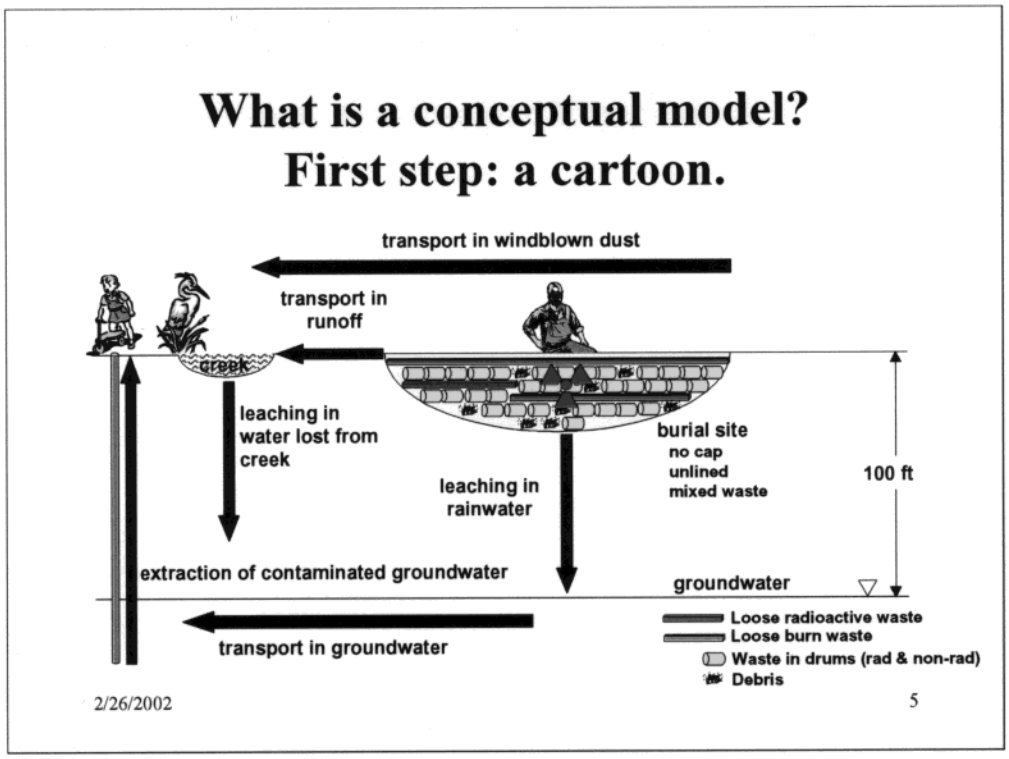
Publications

Interviews

Data collection

Changes continually as more information gathered.

McClellan's might change again.



When I first came into the environmental business, I was taught to draw a cartoon of my site, illustrating everything I knew about the site.

Different cartoons for different contaminants.

Different cartoons for different sites.

What is a conceptual model? Add details.

- Geographic location and dimensions
- Historical activities
- Relationship to other important features
  (other sites, groundwater, surface water, human habitation or work, and habitats)
- Known & potential:
  - Sources
  - Release mechanisms
  - Contaminants, their concentrations, and locations
  - Affected media
  - Migration pathways
  - Human and environmental receptors
- Exposure scenarios

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The requirements for conceptual models are discussed in:

EPA's "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," 1988

-Multi-Agency Radiation Survey & Site Investigation Manual, 2000

-American Society for Testing and Materials' "Standard Guide for Developing Conceptual Site Models for Contaminated Sites," 1995 and "Standard Guide for Site Characteristics for Environmental Purposes with Emphasis on Soil and Rock, the Vadose Zone and Ground Water American Society for Testing and Materials," 1998

Why did McClellan change its radiation conceptual model?

- Before September 6, 2000: believed radium was the only significant contaminant.
- On September 6, 2000 plutonium found in CS-10.
  - Explain where it came from
  - Figure out where else it might be
  - Any other surprises?

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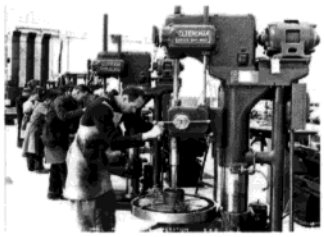
Everything changed in September 2000.

Before that, the Air Force thought the problem was radium.

Did not consider fallout components.

History of Radiation at McClellan

- Radium painting: 1930s–1960s (need exact start/stop dates)
- Storage of radioactive commodities (e.g., electron tubes)
- Maintenance involving depleted uranium and magnesium-thorium aircraft parts



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This is what we know today. It could change.

Base's industrial mission was aircraft maintenance and repair.

De-painting & painting

Replacement and machining of parts

Crash & battle damage repair

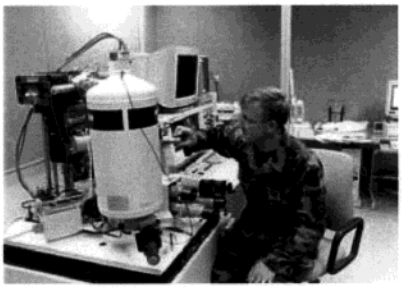
All involve disposal of waste.

UNCLASSIFIED

History of Radiation at McClellan

- **Technical Operations Division (TOD)**
  - **Fallout sampling***
    - **Aircraft**
    - **Ground Stations**
    - **Other**
  - **Radiochemistry Labs (B/334, B/628, B/1080)**
    - **Fallout samples (trying to detect small amounts)**
    - **Calibration sources**
  - **Supplies**

***TOD materials = components of fallout (e.g., plutonium, americium, uranium, cesium, strontium)**



2/26/2002 UNCLASSIFIED 9

Mostly air and particulate samples collected by flying through fallout clouds.

Also other air, water, soil, and tissue samples.

Activities were classified.

All of the information on this slide is unclassified and gathered from open source documentation and interviews.

Ten Scenarios

- Burial of Radioactive Waste
  - Industrial & lab: radium, depleted uranium, thorium, TOD materials
- Release from Sewer Lines
  - Industrial & lab: radium, TOD materials
- Runoff from Aircraft Washing Areas
  - TOD materials
- Spills
  - Storage & transport: radium, thorium, TOD materials
- Disposal of Sewage Plant Sludge
  - Industrial & lab: radium, TOD materials

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Details of these scenarios can be covered in a separate session if desired.

Specifics about contaminant concentrations, migration pathways, receptors, and exposure scenarios will be developed in the site-specific CSMs.

Ten Scenarios

- Use of Burial Site Material as Landscaping Fill
  - Industrial & lab: radium, depleted uranium, thorium, TOD materials
- Airborne Deposition from Stacks & Vents
  - Industrial & lab: radium, TOD materials
- Accumulation in Storm Sewers, Creeks, Vernal Pools
  - Industrial & lab: radium, depleted uranium, thorium, TOD materials
- Accumulation in Sewer Lines
  - Industrial and lab operations: radium, TOD materials
- Debris from Aircraft
  - Depleted uranium and magnesium-thorium parts

Are we in danger *now*?

- **No**
- **Low doses**
  - Low concentrations released (fallout samples, calibration sources, and waste paint *not* weapons or reactor waste)
  - Much of the contamination is underground (pathway interrupted)
  - Amount decreases as you move away from source
- **Confirmatory investigations**
  - Scanned surfaces of some landfills (the rest are planned)
  - Scanned creeks (more planned)
  - Scanned entire airfield (more planned for low-lying areas)
  - Building surveys (including two TOD labs, more ongoing)
  - EPA van scan
  - Spot checks by EPA and DHS

Side Note: Protecting People

- **Radiation investigations—landfills, creeks, airfield, buildings**
- **Removal actions**
  - PRL 32—storage area for aircraft wash water
  - CS-10—burial pit
- **Physical controls—fences, signs, inspections, security patrols**
- **Safety measures for workers**
- **Stopped groundwater usage—done for another reason, but helps here**
- **Near-term investigations—landfill surface scans, low-lying areas survey**
- **Coordinate with EPA and DHS**

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The Air Force has not been ignoring the problem.

It has been investigating, establishing controls, and removing waste.

It is continuing to look.

The Air Force continuously works with the regulators.

Bottom Line

The picture is incomplete, but…

- McClellan released radioactive material to the environment
- Probably spotty—around release locations
- Suspect areas:
  - Burial pits
  - Sewer lines
  - Storm sewers, creeks, and vernal pools
  - Some surface areas (airfield, sewage plants)
  - Groundwater
- One burial site (CS-10) and several surface locations definitely have radioactive waste.
- Most widespread: radium
- Fallout components such as plutonium and americium also present.
- **No imminent risk to workers or neighbors.**

What next?

- **Develop site-specific conceptual site models**
  - Screen all 319 sites against basewide model.
  - Use site-specific information to fill in the details.
- **Sample**
  - Landfill surface scan, sewer survey, Building 252 investigation, low-lying areas survey, basewide radiation data gaps investigation
  - Sampling and analysis plans
  - Field work
  - Reports
- **Select and implement response actions**
  - Feasibility Studies, Proposed Plans, RODs
  - Remedial Action, Monitoring, Site Close-out

Feedback

- Community Relations Team:
  - Linda Geissinger (916) 643-6420 x109
  - Diane Fowler (916) 255-6682
  - David Cooper (415) 972-3237
  - Roxanne Yonn (916) 643-0830 x232
- Rick Solander (916) 643-0830 x228
- Paul Brunner (916) 643-1250 x200